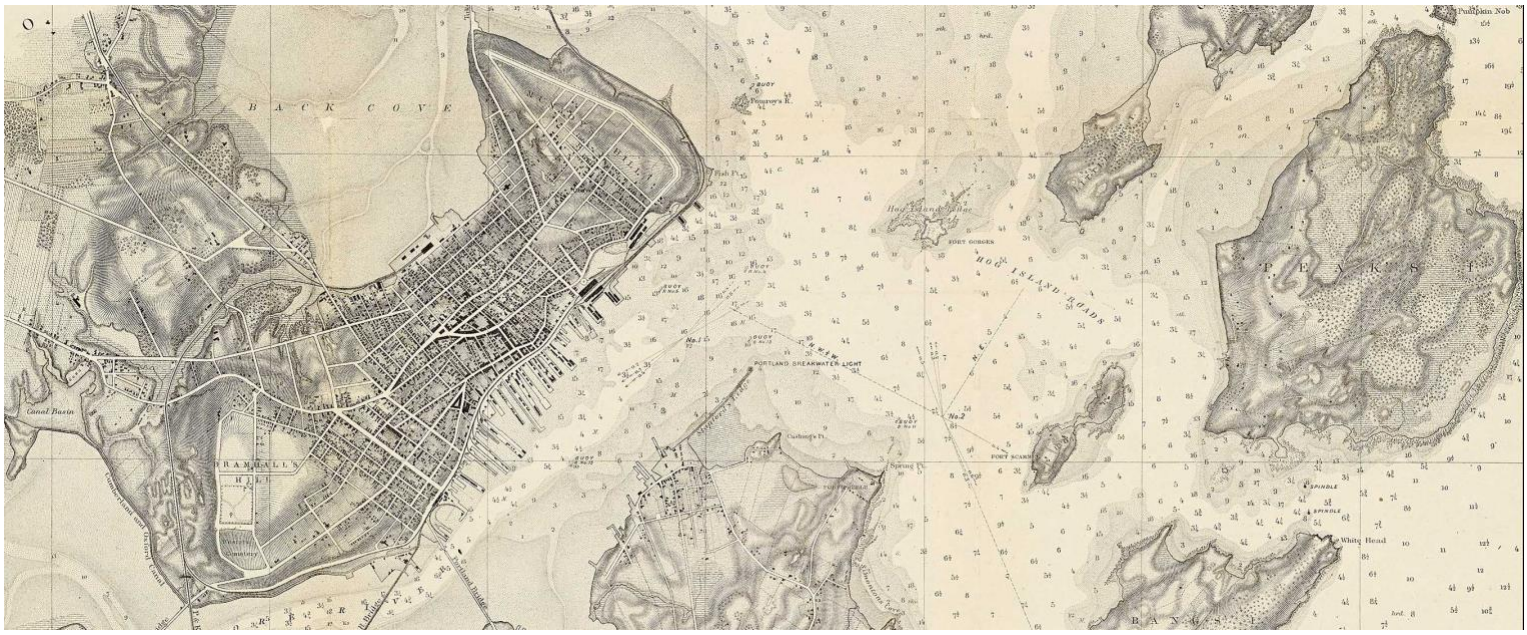
INTERNATIONAL SOCIETY FOR THE HISTORY OF THE MAP

2018 SYMPOSIUM

PROGRAM AND ABSTRACTS



Osher Map Library & Smith Center for cartographic Education

University of Southern Maine, Portland

21–23 June 2018

Locations:

- *C* Cohen Education Center, Osher Map Library, Glickman Library
- *A* Arcade, Osher Map Library, Glickman Library
- *U* University Events Room, 7th Floor, Glickman Library

www.oshermaps.org/ishmap2018

THURSDAY, 21 JUNE 2018

14:30–14:45 – C – Symposium Opening

15:00–16:30 – 1C – Nineteenth-Century Region Construction

Chair: James Akerman

JOHANNA SKURNIK (University of Turku): "Making Colonial Cartographies in the British Empire, c.1830–1870"

KORY OLSON (Stockton University): "Creating France's Next Cartographers: J. Parlier's *La France en 7 cartes*"

JORDANA DYM (Skidmore College): "Hiram Bingham in the Footsteps of Simón Bolívar, from Caracas to Bogota, 1906–1907"

16:30–18:30 – *U* – Reception (cash bar)

FRIDAY, 22 JUNE 2018

08:30–10:00 – 2C – Mapping Modern Infrastructure

Chair: Mark Monmonier

MADALINA VERES (American Philosophical Society): "The American Philosophical Society's Contributions to Infrastructure Projects on the Delaware River"

GEORGE CARHART (City of Portland): "Boundaries Above and Below Ground: 232 Years of Municipal Maps and Plans from the City of Portland, Maine"

JOHN SWAB (University of Oklahoma): "Mapping Risk in Oklahoma and Indian Territories: The Rivalry between the Clarkson Rating Bureau and the Sanborn Map Company, 1890–1915"

08:30–10:00 – 2U – Modern Imperial Territorial Mapping

Chair: Roger Kain

ANTHONY MULLAN (Library of Congress, emeritus): "The Residency Maps of Java"

LINDSAY BRAUN (University of Oregon): "Cultures of Colonial Compilation: C. N. Thomas and State Mapping in Cape Town, 1860–1902"

RICHARD TALBERT (University of North Carolina): "German Maps of Asia Minor and Their Ottoman Adaptation in the Early Twentieth Century"

10:00–11:00 – A – coffee break and special event in OML Reading Room

11:00–12:30 – 3C – Literature and Landscape, Art and Iconography

Chair: Victoria Morse

KAREN PINTO (Boise State University): "Fit for an Umayyad Prince: The Earliest Extant Map of the Eastern World or Earliest Painting of the Moon?"

TOM CONLEY (Harvard University): "Bend of the River: On Nicolas Sanson, *Carte des rivières de France*

curieusement recherchée (1641) and Its Guide, Louis Collon, *Description des rivières de France* (1645)"

JEREMY BROWN (Royal Holloway, University of London): "Putting Myth on the Map: Imaginary Landscapes in Early Modern Calabria"

11:00–12:30 – 3U – Mapping the Modern State: Boundaries and Territories

Chair: Junía Furtado

JÖRN SEEMANN (Ball State University): "Alexander von Humboldt, the Virtual *Grenzgänger*: Mapping the Borderlands between Spanish and Portuguese Colonies in South America in the Early Nineteenth Century."

FRANCESC NADAL (Universitat de Barcelona) and CARME MONTANER (Institut Cartogràfic i Geològic de Catalunya): "French Army Surveying of Catalonia (1823–1827): Technical Modernity against the Liberal Revolution"

RENATO PEIXOTO (Universidade Federal do Rio Grande do Norte): "Nothing Lies Outside the Map: Varnhagen, Jaime Cortesão and the Brazilian Representations of the Tordesillas Meridian"

12:30–14:00 – A – lunch

14:00–17:30 – *C* – AGM and Discussion of Future of ISHM

SATURDAY, 23 JUNE 2018

09:00–10:30 – 4C – Land and Land Ownership in the Nineteenth-Century U.S.

Chair: Ron Grim

JYM ST. PIERRE (Restore the Maine Woods): "Mapping the Maine Woods"

JEFFERSON M. MOAK: "The Five-Dollar Map: Philadelphia Cadastral Map Publishing of the 1850s"

SCOTT WHITE (Fort Lewis College): "Mapping the Changes to Yellowstone National Park's Boundary"

09:00–10:30 – 4U – Colonial Mapping in Ibero-America

Chair: Jordana Dym

JUNÍA FERREIRA FURTADO (Universidade Federal de Minas Gerais): "Surveying Tejuco Village in the Diamond District, Brazil, 1774"

VALQUIRIA SILVA (Universidade Federal de Minas Gerais): "The case of controversy between Archbishopric of Bahia and the Bishopric of Rio de Janeiro and the Jesuits"

DENISE A. SOARES DE MOURA (São Paolo State University): "Mapping the Unforeseen: The Chorographical Chart of 1772 of the *Sertões de Guarapuava*, in South Brazil"

10:30–11:00 – A – coffee break

11:00–12:30 – 5C – Sharing and Mixing Information across Modes and Cultures

Chair: Isabella Alexander

EVELYN EDSON (Piedmont Virginia Community College, emerita): "Island Books and Sea Charts:

Mapping the Mediterranean in the Fifteenth and Sixteenth Centuries"

ROBERT LEE (Harvard University): "Ignorance Indexed: A Cartometric Analysis of William Clark's Master Map"

KATHLEEN WEESSIES (Michigan State University): "John Farmer, Michigan's Extraordinary Mapmaker"

11:00–12:30 – 5U – Cosmography and the World

Chair: Tom Conley

MARIA DAWSON (University of Toronto): "The Waldseemüller Map: Rethinking Map Making and Reading"

IAN FOWLER (New York Public Library): "*Kosmographiya*: A Cultural-Historical Reexamination of an Eighteenth-Century Russian *mappamundi*"

STEFAAN MISSINNE (IMCoS): "Leonardo da Vinci's Globe from 1504 and the Discovery of His Map of America"

12:30–13:30 – A – lunch

13:30–15:00 – 6C – Mapping Conflict, Conflicted Mapping

Chair: Lindsay Braun

VICTORIA MORSE (Carleton College): "Maps and the Regional State in Fourteenth-Century Northern Italy"

LEAH THOMAS (Virginia State University): "Human Commodification: Mapping African Presence in Early America"

MEGAN BARFORD (National Maritime Museum): "Cartography and Forced Migration: A Contemporary Collecting Project at the UK National Maritime Museum"

15:00–15:30 – A – coffee

15:30–17:00 – 7C – Conditioning Map Knowledge and Technology in the Nineteenth Century

Chair: Francesc Nadal

ISABELLA ALEXANDER (University of Technology, Sydney): "The Legal Regulation of Maps and Geographic Knowledge in Australia, 1788–1916"

MARK MONMONIER (Syracuse University): "Map-Related Patents as a State-Managed Survey of Cartographic Innovation"

DAVID WEIMER and LENA DENIS (Harvard Map Collection): "Monographs, Molasses, and Maps: Circulating Commodities and the Creation of the Harvard Map Collection"

17:00–17:15 – C – Symposium Closing

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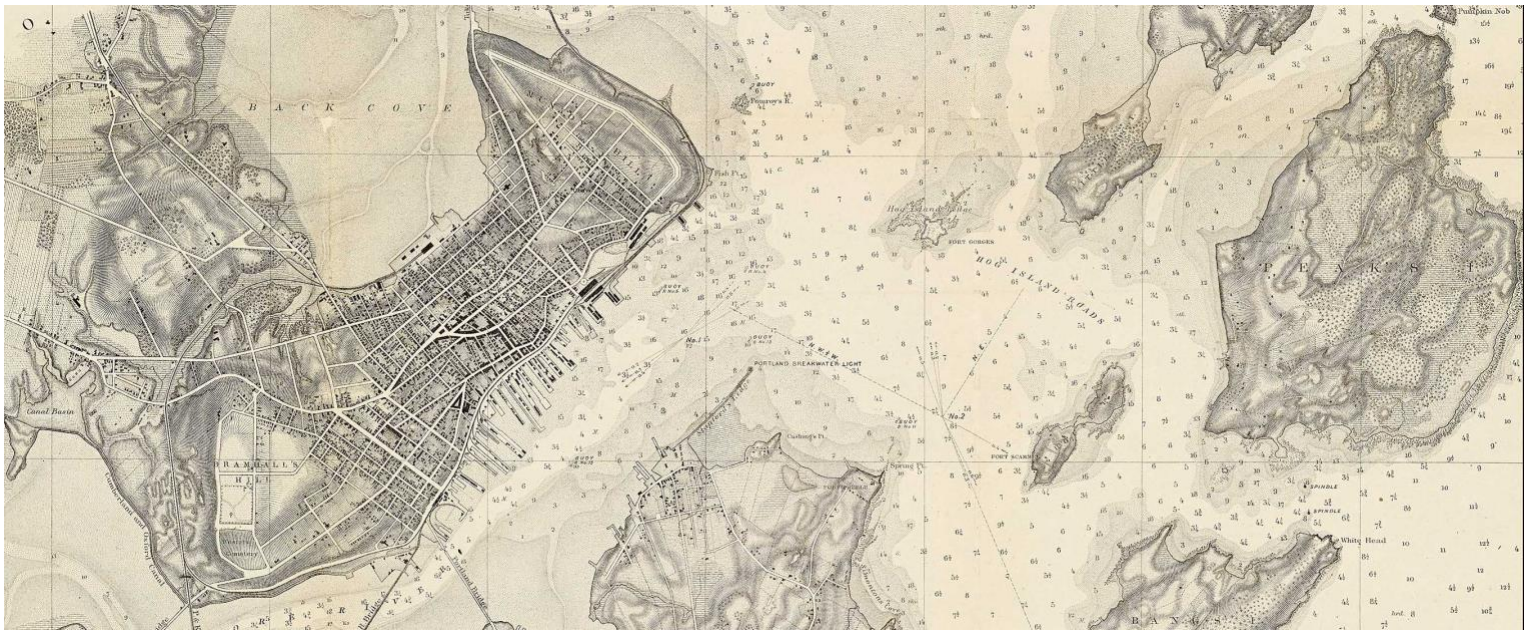
ABSTRACTS (BY PRESENTER)



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Alexander, Isabella

Professor, School of Law, University of Technology, Sydney

The Legal Regulation of Maps and Geographic Knowledge in Australia, 1788–1916

7C – Conditioning Map Knowledge and Technology in the Nineteenth Century

This paper explores the legal regulation of geographical knowledge in colonial Australia from the arrival of the First Fleet in 1788 up to the year 1916. Many writers have noted the centrality of surveying and mapping to the imperial project as expressions of surveillance, construction and control. However, less attention has been paid to the legal regulation of the maps themselves and the indirect legal regulation of the knowledge they contain. The paper looks at a series of disputes over the ownership and copying of maps, considering the interactions between the state, colonial officials and settlers in relation to the gathering of information, the production of maps and their dissemination and commercialisation. It considers Surveyor-General Mitchell's disputes with the Colonial Office and a subordinate surveyor over his Map of the Nineteen Counties in the 1830s, unauthorised copying of maps of the goldfields in the 1860s and 1870s and litigation over street directories and war maps in the early 20th century. In this way it considers the complex relationships between the colonising and commercial objectives of the imperial state as well as those of individuals, and the role played by copyright law in regulating or mediating these relationships. Focussing attention on the maps that generated copyright disputes offers new perspectives on the way that mapmaking in Australia shifted from being largely state-directed to being a private, commercial activity and how the kinds of maps being produced changed over the course of the nineteenth century. It highlights the changing ways that the state sought to regulate the flow of geographical information, and the important contributions of multiple actors, from explorers and surveyors, through colonial officials and scientific societies, to cartographers, publishers and estate agents.

Barford, Megan

Curator of Cartography, National Maritime Museum, Greenwich, London

Cartography and Forced Migration: A Contemporary Collecting Project at the UK National Maritime Museum

6C – Mapping Conflict, Conflicted Mapping

In autumn 2017 the National Maritime Museum agreed to acquire its first digital map, made, we believe, sometime in 2015. Regularly exchanged over Whatsapp and Facebook in 2015 between Syrian refugees, it describes the different stages of the so-called 'Balkan Route' from Turkey to Western Europe. By the end of that year, it was already an old map. Although this map dates from the very recent past, the securitisation of borders in Europe means that the Balkan route is no longer understood to be viable. The paper will discuss the way in which the ephemeral navigational material made for, and by, refugees, regularly becomes 'old' according to the definition used by the conference, because of the ways in which state border regimes are changed to frustrate the dangerous and desperate journeys undertaken by people forced to leave their homes. The paper will also situate the acquisition of this map within a new research and collecting project taking place at Royal Museums Greenwich, which revolves around understanding the ways in which maps are part of, implicated in, and reflect on, refugee journeys in the twenty-first century, encompassing ephemeral digital material, the maps produced and used by border and coastguard agencies, maps produced for NGOs, and contemporary art concerned with forced migration which takes cartographic form. The

research and resulting collection will enable an exploration of maps' fluid status, as art works, as political tools, as pragmatic resources, as forms of memory as well as planning. In working through some of the ethical complexities of collecting in this area, the project will also contribute to understandings of the purpose - and limits - of contemporary collecting.

Braun, Lindsay

Associate Professor of History, University of Oregon, Eugene, Oregon

Cultures of Colonial Compilation: C. N. Thomas and State Mapping in Cape Town, 1860–1902

2U – Modern Imperial Territorial Mapping

Eclectic compilation mapping, from an evolving admixture of official and unofficial sources, was a well-established mode of state cartography in a variety of late nineteenth-century colonial settings. Although this sort of mapping was arguably more art than science at times, and driven by exigency rather than any specific theory, its practitioners tended to be both demanding and exacting, and could enjoy long careers overseeing the map output of colonial states. One such figure, Charles Neumann Thomas (1840-1923), served as Chief Compiler for the Surveyor-General's Office (SGO) of the Colony of the Cape of Good Hope for nearly four decades up to his official retirement in 1900. This period subtended many of the greatest transformations of the colony, including its growing self-government, the mineral rush, the annexation of African polities, and of course the South African War. Throughout, Thomas was central to the Cape government's cartographic activities.

This paper takes the position that Thomas enjoyed a central role—if not *the* central role—in the production of official cartographic knowledge about the Cape up to the turn of the twentieth century. It explores the position and role of the compiler within his department through Thomas's own manuscript memoir, a variety of letters and reports, and a variety of maps. Thomas in fact harbored significant complaints about the culture of the SGO and its denial of conspicuous credit to him for his work. Although he was the chief of a team draughtsmen by 1900, Thomas had taken initiative to advance major projects on his own, and so occupied a space between that of the independent cartographer and the bureaucratic functionary across a period when the quality of data and the autonomy of survey offices changed dramatically.

Brown, Jeremy

Department of Art History, Royal Holloway, University of London, and British Library

Putting Myth on the Map: Imaginary Landscapes in Early Modern Calabria

3C – Literature and Landscape, Art and Iconography

In 1777 the British grand tourist Henry Swinburne pushed his rowing boat off from the Calabrian shore and set out towards a rocky island. His purpose was to land on what was then "marked in every map as the habitation of Calypso"—Homer's sea-girt Ogygia. Swinburne's quest to find Ogygia was ultimately disappointing, and the location of Calypso's island has still not been conclusively resolved by historical geographers. The tension in Swinburne's and other travellers' accounts points to a dissonance between the pre-conceived imaginary and the real experience of a place. Focussing on this area of Calabria whose origins and history hark back to Greek mythology, this paper will investigate how evolving mapping practices during the early modern period not only changed the way Calabria's remote landscape was presented in cartographic form, but also how this affected its

perception by western travellers. It will draw upon Italian maps from King George III's Topographical Collection at the British Library, in conjunction with geographical texts and travel accounts, to highlight cartographic representations of two distinct moments in time: the late sixteenth and late eighteenth centuries. At first Calabria's form on printed maps took on a mythical quality when early antiquarians identified the island of Ogygia off the shore. But as travellers, such as Swinburne, and then surveyors started arriving in this region, mapping practices were changing, which caused Ogygia to slip back beneath the waves. Aside from the island, other prominent mythical geographical features, such as the *Monte della Sibilla*, disappeared from the map. If we want to understand fully how early modern travellers experienced Italian landscapes, then we must look to the words and images that formed their ideas about a place. This paper argues that maps of Calabria form a useful case study that clearly demonstrates how the classical tradition and cartography could come together to construct imaginary landscapes, and how these were subsequently erased by survey.

Carhart, George S.

Engineering Archivist, Department of Public Works, City of Portland, Maine

Boundaries Above and Below Ground: 232 Years of Municipal Maps and Plans from the City of Portland, Maine

2C – Mapping Modern Infrastructure

Books about cities and their histories that use maps and plans are common. But more often than not, the maps and plans that are used to illustrate them were commercially printed and readily available to the public. Such maps and plans only present a rough representation of the way in which the city grew and expanded. They may show how the external boundaries of the city changed or how the city was divided into districts or depict public transportation routes, but they rarely delve into the imagery or topics that directly relate to the administration and planning of a city.

The City of Portland, formerly the township of Falmouth, was formed in 1786. Since this date an ever increasing number of documents, plans and maps have been generated, all of which relate to the administration of the city. The Engineering Archive of the Department of Public Works maintains over 100,000 of these plans, maps and documents. These items cover a wide range of administrative and engineering subjects, from subdivision plans and property surveys, to water resources, road and rail infrastructure plans. Many of the plans deal with boundaries, land ownership and land use rights. Where a Country or State may over time have conflicts over larger territorial boundaries, and conduct surveys of its national borders or adjudicate state lines within its boundaries, Municipalities are confronted with boundary and land use disputes as part of their daily routine. With the help of some of the plans held in DPW's archive I will present just a few of the ways that plans and surveys come into play in the adjudication and defining of property boundaries, municipal and private right of ways, easements and paper streets, and city property encroachment disputes.

Though in most cases the plans, drawings and maps held by archives such as Portland's Public Works, Engineering Archive, are bland, utilitarian and without the aesthetic appeal of the commercially published city maps, they tell the real story of history, growth and development of a city. Boundaries are not just something that countries and their statesmen patriotically debate and go to war over, boundaries are also disputed by neighbors in a smaller, but just as heartfelt way.

Conley, Tom

Abbott Lawrence Lowell Professor of Romance Languages & Literature and Visual and Environmental

Studies, Harvard University, Cambridge, Mass.

Bend of the River: On Nicolas Sanson, Carte des rivières de France curieusement recherchée *(1641) and Its Guide, Louis Collon,* Description des rivières de France *(1645)*

3C – Literature and Landscape, Art and Iconography

Received knowledge often tells us that decoration defines a good deal of Baroque cartography. Cartouches, banderoles, cursive flourishes, strapwork, festoons, sways, swirls and other ornamental forms proliferate along the edges and even cut their way into maps gathered in the major atlases of the seventeenth century. As James Welu noted (in *Art and Cartography,* 1987), designers mix and match inherited forms in order to endow their maps with eye-catching style. In the lexicon of philosopher Gilles Deleuze (1988), without direct reference to cartographic documents, decorative "folds" comprise many of the defining traits of a greater phenomenon that he calls the "Baroque". Far from contesting or even modifying these hypotheses, the aim of this paper is to discern a different or "other" Baroque within topographical maps where, above and beyond the areas described and drawn, hydrography and potamography are salient. Indexical but also almost decorative, fluvial forms mediate what would be the inside and outside of the Baroque map.

To a strong degree—and here is the thrust of the paper—fluvial matter meshes a longstanding tradition of "allegory" or similitude (by which map and living body are correlated) and scientific description (based on survey), what in his words archeological historian Michel Foucault (1966) had called "representation" (a regime of signs standing in for things rendered absent). The paper will study where in fact descriptive, notably literary poetry and prose, is related to the decorative process of the Baroque map. Attention will be drawn to Nicolas Sanson's *Carte des rivières de France curieusement recherchée* (1641) in contiguity with much of the literary work with which it is directly or indirectly affiliated (see title above). Initial and tentative research on the topic recently appeared in a chapter included in Anders Pedersen, ed., *Literary Cartographies* (Cambridge: MIT Press, 2017).

Dawson, Maria

Department of History, University of Toronto, Toronto, Ontario

The Waldseemüller Map: Rethinking Map Making and Reading

5U – Cosmography and the World

The 1507 Waldseemüller map was the first European drawn map to include the Americas as a continent separate from Asia, the first to begin detailing the west coast of the continent, the first to use the name 'America,' and first to include certain details of the African continent. I argue that the meaning of the Waldseemüller map derived not only from its contents, but from the circumstances in which it was read and the public discourses that surrounded the map. I focus my research on three major junctures in the history of this artifact: the first half of the sixteenth century when the map was drafted, published, and distributed; 1901, when the map was rediscovered after having been missing for at least two hundred years; and the turn of the twentieth century when the map was bought by the Library of Congress.

This presentation will use the analytical frameworks established by geographer Brian Harley in the 1980s and early 1990s, and expanded upon by Jeremy Crampton, Denis Wood, Rob Kitchin, and Martin Dodge in the 2000s, that challenged the ontological security of cartography. While this framework has been applied to mapping practices today, it has scarcely been applied to historically

significant maps. Through this lens, this presentation discusses themes of early colonial encounters in the Americas and their changing interpretations of the Waldseemüller map at snapshot intervals over the last 500 years.

Dym, Jordana

Professor of History, Skidmore College, Saratoga Springs, New York

Hiram Bingham in the Footsteps of Simón Bolívar, from Caracas to Bogota, 1906–1907

1C – Nineteenth-Century Region Construction

Hiram Bingham, a Harvard University PhD and Yale University lecturer, is perhaps best known for an archaeological "find": the Inca ruins at Machu Picchu. But on his first trip to South America, in 1906-1907, Bingham was inspired by a different historical place and time: he undertook a scientific "expedition" to repair a great lacuna in the history of the wars of independence. For, he lamented, "I could find no maps of [Simón Bolívar's] battle fields and few trustworthy accounts of the scenes of his greatest activity" (v). Bingham kitted up to determine if, as Spanish American historians supposedly asserted, the trek along an "impassable" road across Venezuela and Colombia was "as wonderful as the more famous marches of Hannibal and Napoleon [over the Alps]." His company included Royal Geographic Society-trained Dr. Alexander Hamilton Rice (who stayed to explore the Amazon), two West Indian guides, and first a Venezuelan cart driver and then a Colombian not-so-ex-thief. Bingham spent a month in Caracas, ten days on the Carabobo battlefield, and four months crossing the Llanos and Andes to Bogotá, following routes from two of Bolívar's campaigns (1819-20, Achaguas-Bogotá and 1821, Barinas-Carabobo-Valencia-Caracas) all the while making "scientific observations" he hoped would serve history, geography, and ethnology (v-vi).

Bingham did explore and sketch the battlefields (on which he also hunted, with a visiting aristocratic Venezuelan and his blood hounds), and sorted out to his own satisfaction the movements of Spanish troops, Bolivar's forces and the British Legion that helped win the battle of Carabobo. On the road, he gained appreciation of the hardships troops encountered experiencing almost impassible swamps, poorly provisioned plains, and a steep, treacherous mountain pass in the inhospitable cordillera. However, despite writing that "it is to be our task to make a map," Bingham published no maps of his findings, instead offering an appendix.

This presentation will consider the map that made it into print, a "sketch map", at 1:3,000,000 scale, prepared for a twenty-six-page article about the journey published by the Royal Geographic Society in 1908. What contributions did Rice and Bingham make to the map? How did Bingham's route compare with Bolívar's? Why did the RGS choose only to present Bingham's movements? How does the Bingham map compare with previous maps of Bolívar's battles and travels, such as those published in Codazzi's 1840 and 1889 atlases of Venezuela and Colombia, respectively? What happened to the planned comparison (textual and cartographic) with Hannibal and Napoleon?

The presentation will also place this map in conversation with a dozen manuscript sketch maps -- of battles and elevations, routes, and building town plans—from the traveler's journal that were not the basis for published maps. Here, the goal is to consider how and why this mapping traveler's sketches did not merit inclusion in the travel publication, when making such maps both inspired travel and happened en route. This 'silencing' of the sketch maps is unusual; a traveler's notes and sketches generally were a selling point for publications for professionals, including with the RGS, and

intended for a more popular audience.

Principal Primary Sources:

Bingham, Hiram. *Journal of an Expedition Across Venezuela and Colombia, 1906-1907*. New Haven, Conn.; London: Yale Publishing Association; T. Fisher Unwin, 1909.

Bingham, Hiram. "Personal and Private: Journal of my trip across Venezuela + Colombia in January, Feb, Mar, Apr and May 1907." ms. Bingham Family Papers, Yale University.

Codazzi, Agustín. *Atlas físico y politico de la República de Venezuela.* Caracas/Paris, 1840.

Codazzi, Agustín. *Atlas Geográfico e Histórico de la República de Colombia*. Paris, 1889.

Edson, Evelyn

Professor emerita of History and Humanities, Piedmont Virginia Community College

Island Books and Sea Charts: Mapping the Mediterranean in the Fifteenth and Sixteenth Centuries

5C – Sharing and Mixing Information across Modes and Cultures

Cristoforo Buondelmonti's *Description of the Archipelago and Other Islands,* which appeared in 1420, was a revolutionary treatment of a common subject. While islands had been written about by others, Buondelmonti not only traveled to many of the sites in his book but also made maps of each island. These maps were unprecedented in their accuracy and detail, and Buondelmonti asserted that they would be useful to sailors. At the same time sea charts were being made of the Eastern Mediterranean. While these charts showed their larger geographical setting, the islands were reduced in size, and few details were included, especially of the interiors. Over the next two centuries a number of island books were produced, mostly dependent on Buondelmonti for both text and map. The great mapmakers of the 16th century, such as Ortelius and Mercator, included island maps in their atlases. How did these two forms interact? Buondelmonti's maps do not appear to be based on sea charts, though they might have been his inspiration. Sea charts continued to represent islands in greatly reduced form, but the compilations of the 16th century included more detailed maps of islands which were surprisingly dependent on the island books.

Fowler, Ian

Head, Lionel Pincus and Princess Firyal Map Division, New York Public Library, New York, New York

Kosmographiya: *A Cultural-Historical Reexamination of an Eighteenth-Century Russian* mappamundi

5U – Cosmography and the World

In the eleventh edition of *Imago Mundi* Leo Bagrow wrote an article titled "An old Russian world map," in which is described a map he titled *Kosmographiya (*later: *Kozmografiya.*) This map is a fascinating early 18th century Russian mappa mundi that blends many centuries of European cartographic styles with text influenced by various cosomographical schools of thought. In examining the edition of the map held in the New York Public Library's Lionel Pincus and Princess Firyal Map Division it is clear that a re-examination of the cultural-historical importance of this map be conducted.

In Bagrow's article on the map he does an extraordinary job of translating one hundred and nineteen descriptions of places as well as the legends that appear at the margins of the map and around the representations of the four continents. These descriptions are accompanied by a facsimile of the

Kosmographiya as well as a numbered transparent overlay for the map with the numbers corresponding to the descriptions in the text. Unfortunately Bagrow's article in Imago Mundi and his previous works on the subject seem to be the only scholarly attempts at analyzing the map.

While Bagrow provides an exceptional textual description of the map and traces the intellectual source of the maps back to *Kratkaya Kosmografiya* the introduction to the larger work *Kniga glagolemaya kozmografiya* his treatment of the map's provenance and significance ends there. Bagrow also references Rovinsky's inventory of five editions of this map although comparative analysis of the maps is not conducted, even though Rovinsky's tracing of an earlier edition of the map contains major differences, leaving the cultural and cartographic history of the various editions of the map unexamined.

This paper will present the results of a comparative analysis of decorative and content changes in the various editions of the *Kosmographiya*. I will also re-evaluate the historical and cosmographical context of the map based on studies of Russian mapping, print culture, and Cosmography done in the last half century. The results of this re-evaluation will be to present the importance of the Kosmographiya on its own, as well as its representation of the blending of various cosmographies in early Russia.

Furtado, Junía Ferreira

Professor, Department of History, Universidade Federal de Minas Gerais, Belo Horizonte, Brazil

Surveying Tejuco Village in the Diamond District, Brazil, 1774

4U – Colonial Mapping in Ibero-America

Tejuco village, now the town of Diamantina, was the headquarters of the Diamond District, placed in the Northeast of Minas Gerais captaincy. At the end of 1771, a Royal decree abolishing the contract system made mining another monopoly of the Crown and led to the establishment of the "Royal Diamond Extraction Company", an Imperial organ directed by the Diamond Intendant. When the French traveler Auguste de Saint-Hilaire visited the town of Tejuco (present-day Diamantina) in 1821, he considered the place to be the most pleasant and wealthy urban settlement he had seen in the entire captaincy of Minas Gerais.

The census and map entitled *Mapa dos moradores do arraial do Tejuco, conforme cada uma das ruas e becos, de que consta o mesmo arraial* ("Map of the residents of the town of Tejuco, according to each of the streets that comprise said town") provides a impression of the social configuration of the city very different from the one left to us by Saint-Hilaire. There were some 510 houses in the village, home to a total of 884 free residents. This census reveals that "the total number of people of color that were heads of household in Tejuco was astonishing: adding together the blacks, creoles, mulattos, "pardos" and "cabras," the total came to 286 individuals, representing 56% of the total" of heads of households. Whites were the majority on Rua Direita, Rua Quitanda, streets where most of the traders lived, on Cavalhada Nova and Rua do Amparo, both in the town centre, while the freedwomen were the majority on less central streets like Macau, Macau de Baixo, Campo and Burgalhau, and on such lanes as Gomes de Aquino, Intendência, Cadeia, Padre José Guedes and Mandioca. Throughout the various streets of the town, those who had never been enslaved, white and mestizo, lived side-by-side with former slaves, diluting the hierarchical borders according to which the society attempted to regulate itself. The aim of this paper is to analyze these map and census in order to show the society

organization in the village and why and how the Portuguese Crown decided to make them in order to control and survey the population.

Lee, Robert

Junior Fellow, Society of Fellows, Harvard University, Cambridge, Massachusetts

Ignorance Indexed: A Cartometric Analysis of William Clark's Master Map

5C – Sharing and Mixing Information across Modes and Cultures

This paper introduces a new cartometric technique for assessing the point accuracy of early maps and applies it to William Clark's "master map" of western North America. The method uses GIS to measure positional accuracy within a cartographic plane without distorting the digital image with georectification; the results expose a spectrum of locational ignorance that can be useful for historical interpretation. Clark's map, drawn in 1810 and famous for showing the path of the Lewis and Clark expedition, makes an ideal test case. Hailed for its unparalleled accuracy, Clark's map is rich with identifiable landmarks. My analysis of over 1,400 of these points suggests that the standard praise of Clark's survey is at once both overblown and misplaced. Patterns in the accuracy of features, perhaps not unexpectedly, expose the map as a mélange of solid and shoddy information. Quite surprisingly, however, the most painstakingly located features on the map concern Clark's ongoing work as a federal official in charge of Indian affairs in the Missouri Territory circa 1810, not his earlier trek to the Pacific, as historians have long assumed. Though unremarked on in the literature, the map's Indian treaty lines, US military installations, Indian trade factories, and Indian villages are among the most accurately placed features. Clark could not have accomplished this without a sincere desire to lay these points down as best he could, as well as the information needed to do so—a finding that should be at the forefront of questions about why this map matters. By indexing degrees of ignorance and knowledge through feature accuracy, historians of early maps can deductively re-enter the cartographer's studio and ground claims about mapmakers' sources and priorities. In this case, this technique supports a major reinterpretation of a document widely considered among the most important maps of North America drawn in the nineteenth century: Clark's master map was concerned as much, if not more, with state occupation of the near west of the lower Missouri River Valley as it was with federally sponsored exploration of the far west of the Pacific Coast.

Missinne, Stefaan

Austrian Representative, IMCoS

Leonardo da Vinci's Globe from 1504 and the Discovery of His Map of America

5U – Cosmography and the World

In the codex Manuscript F page 68 recto dating from the early sixteenth century Leonardo specifically uses the words "*carta da navicare*" or "map to navigate." He is referring to a portolan chart and in his codices such as the Codex Leicester page 31 recto he is referring to nautical miles instead of land miles. This paper takes a closer look at Leonardo´s unknown activities in producing early maps and globes, some of which have been erroneously interpreted as pieces of textile. It also looks as some of his vernacular Italian and offers evidence that English Translations made from his codices were erroneous and therefore misleading.

Furthermore, it offers irrefutable evidence that Leonardo not only knew about the discovery of the

New World, but he actually made a drawing using a sectional views of the world to portray the old Ptolemaic world next to the newly discovered fourth continent i.e. Mundus Novus showing The West coast of Brazil, The East- and The West coast of Africa. His drawing of the New World is one of the earliest but unrecorded maps in the history of Cartography. Leonardo not only refers to Amerigo Vespucci in his codices but based on the above he must have had direct access to cartographic material from Vespucci, both terrestrial and celestial.

The celestial information received from Amerigo Vespucci in Florence in 1503 allowed Leonardo for his inclusion of the "*trigoni orthogoni schema*", a kite-like-asterism group of stars of an astonishing size i.e. "*unus ganopus albus eximiae magitudinis*" enclosed in the universal orb of the Salvator Mundi auctioned at Christies for 450.000.000 USD in November of 2017. Leonardo´s knowledge of these painted stars offers the Terminus Post Quem of that famous painting. The presentation ends with the findings about America´s oldest Cartographic Birth Certificate and offers evidence that Waldseemüller never would have constructed a terrestrial globe having 365 degrees.

Moak, Jefferson M.

The Five-Dollar Map: Philadelphia Cadastral Map Publishing of the 1850s

4C – Land and Land Ownership in the Nineteenth-Century U.S.

The subscription cadastral map became popular during the period just prior to the Civil War. Two of the chief players behind the cadastral map boom were Henry F. Walling of Boston & New York and Robert Pearsall Smith of Philadelphia. Smith's Map Manufactory was responsible for approximately 200 separate maps between 1846 and 1864: other Philadelphia map publishers, such as Richard Clark, James D. Scott, Henry F. Bridgens and E.M. Woodford produced more than 100 county, town and city maps during the same period. Many others contributed to the success (and failure) of various map proposals. Bates Harrington generically noted the interrelationship between many of the key players in county map production in the Northeast United States in his 1879 expose. The efforts of the Philadelphia community of lithographers, engravers and printers contributed to the emergence of the cadastral map into a colorful wall hanging. The complicated process between the concept of a county map project and its completion involved teams of surveyors, artists, agents, lithographers, printers and newspaper editors. Generally, two years would pass between the announcement of the project and the final distribution of a cadastral map. The publisher acted as the middle-man in the entire process including contracting surveyors and artists, hiring agents and using newspaper stories and advertisements to drum up local support, ensuring that the map production was timely, and distributing the final map. The surviving record of one publisher explains some of the costs incurred during production. Maps were to be sold by subscription only: few copies would be available for retail sales as only a limited run were produced. The lithographer would prepare a black and white draft of a map which the publisher showed to county residents for their approval and to make amendments before the final map was produced. The finished map would then be distributed to the subscribers and monies collected. Surprisingly, the cost of the finished county map stayed steady throughout the decade at five dollars per map.

Monmonier, Mark

Distinguished Professor, Department of Geography, Syracuse University, Syracuse, New York

"Map-Related Patents as a State-Managed Survey of Cartographic Innovation"

7C – Conditioning Map Knowledge and Technology in the Nineteenth Century

Between 1840 and 2012 the United States Patent Office awarded 304 patents for map-related inventions classified as either Printed Matter—Map or Printed Matter—Indexed Map. Analysis of these patents and additional patents assigned to the more varied Education and Demonstration/Geography class led to findings that (1) the patents database is a valuable state-sponsored collection—or survey—of map-related methods and mechanisms, many of which are seldom discussed by map historians; (2) map-related patents tended to address map use rather than mapmaking per se, and many of these inventions (such as map holders, addressing schemes, streetcar transfers, and folding methods) were perhaps too quotidian to attract the attention of cartographic scholars; (3) the patents system is a "parallel literature" that had complemented the traditional scientific-technical literature by providing systematic vetting, broad and guaranteed dissemination, and a durable record of personal achievement; (4) few map-related patents were developed commercially, which suggests fame rather than fortune as the overriding motive for seeking a patent; (5) trends in the patenting of map-related inventions tend to confirm the "Theory of Multiples," which offers a time-is-ripe explanation for similar discoveries by inventors working independently; (6) Patent Office case files and published patents can show the transition of a innovative method or device from "non-obvious" to "old"; and (7) map-related patents point to the existence of a diverse range of artifacts rarely found in institutional or private map collections but important nonetheless to the systematic study of cartographic thinking and map use. This last point is an argument for the establishment of national or international museums of cartography richer and more diverse than present-day map collections. In addition, emergence of digital cartography after 1970 fostered a new style of patenting characterized by the naming of multiple co-inventors, the assignment of property rights to corporate or government entities with many patents, defensive or preemptive patenting, and spurious lawsuits by so-called patent trolls.

The research benefitted from the systematic scanning of published patents by the Google Patents Project, which provided free searching and online access, and from "Big Microdata" research tools such as Ancestry Library Editions and Newspapers.com, which were useful in reconstructing the life stories of individual inventors. That said, many inventors left a minimal or fragmented biographical footprint, complicated by poor handwriting, undependable reporting to a census taker or directory canvasser, or unreliable OCR (optical character recognition) procedures. In addition, the US Patent Classification System, used by patent examiners to evaluate originality, was indispensable in identifying patents intended to promote specific map-use or map-making tasks, and US National Archives in Kansas City provided (for a fee) photocopies of correspondence between the applicant's attorney and the patent examiner. Employment records from the National Archives are among the sources for a follow-on project that looks at a single inventor.

Morse, Victoria

Professor of History & Director of Medieval and Renaissance Studies, Carleton College, Northfield, Minnesota

Maps and the Regional State in Fourteenth-Century Northern Italy

6C – Mapping Conflict, Conflicted Mapping

A handful of regional maps survives from fourteenth-century northern Italy, including the local maps contained in the works of Opicino de Canistris (1298–ca.1354). These maps appear in manuscripts

that record in various ways the civic commitments and political concerns of their highly literate authors. This paper explores the relationship of these surviving maps to the turbulent politics of northern Italy in the early fourteenth century when factions tore apart the social fabric of the city-states and lords like the Visconti of Milan began to build regional states that swept up formerly independent cities into larger political units. In particular, it examines the tools that contemporaries had at their disposal to represent their local and regional landscapes in the face of conflict and change. Comparing the surviving maps with textual evidence from chronicles and other sources, this paper asks how the political imagination of the time was (and was not) spatialized and how it connected landscape and territory with the abstract notions of political power and jurisdiction. It suggests that we should understand the surviving maps as tools for the self-conscious assertion of identity through place in a fluid political situation.

Moura, Denise A. S. de

São Paulo State University (UNESP), Franca, São Paulo State, Brazil

Mapping the Unforeseen: The Chorographical Chart of 1772 of the Sertões de Guarapuava*, in South Brazil*

4U – Colonial Mapping in Ibero-America

This paper addresses the process of creation of the first map of the *Campos de Guarapuava,* the inland of the current Paraná State, in South Brazil. The manuscript "Carta Chorografica" (Chorographical Chart) made in 1772 by unknown authors and preserved in the Casa da Ínsua, Penalva do Castelo, Portugal, demonstrates how the mapping the interior of America in the eighteenth century was the result of unforeseen decisions and was furthermore guided in unpredictable ways by the native populations encountered during the mapping expeditions instead of being a simple product of the established European agenda of territorial expansion. After the Treaty of Madrid (1750), tensions between Portugal and Spain for defining their frontiers in South America increased especially over the *Sertões of Tibagy*, whose lands were rich in gold, diamonds and waterways to the Paraná River, a fluvial frontier between both Iberian Empires and a channel to the River Plate estuary whose dominium was a desideratum of the Portuguese since the seventeenth century. Desiring to collect geographical knowledge and to construct a manuscript cartography of these *Sertões*, with the objective to request rights and sovereignty over these lands and to face down the Spanish, the Portuguese organized from 1768 to 1774 eleven mapping expeditions. After discovering and navigating some rivers, the soldiers of the sixth expedition arrived at the unforeseen *Sertões of Guarapuava* that, distinct from the *Sertões of Tibagy* and previously uncharted. After four more expeditions, that is, with the tenth expedition, the Chorographical Chart of 1772 was completed. The examination of this Chart confirms that cartographical materials created in unforeseen circumstances of mapping might have some characteristic, as was the case of this one, whose lines, drawings, and writings were made by two hands with two types of material for drawing and writing: ink and pencil. This Chart suggests also that it might have been a mixture of itineraries to give directions of space, moral and political messages to soldiers and a sketch towatds the creation of an official map. The study and interpretation of the process of creation of this Chart is supported on recent history of cartography whose approach see mapping and map as device of social communication and interaction among various social agents. The conclusions that will be presented in this paper hope to join to another scholarship engaged in construct a knowledge of the history of the modern cartography from a non-Eurocentric perspective.

Mullan, Anthony

Cartographic Reference Specialist, Library of Congress (emeritus)

The Residency Maps of Java

2U – Modern Imperial Territorial Mapping

The purpose of this paper is to introduce the little known but significant Dutch survey of the island of Java. The *residentie-kaarten* (provincial maps) survey employed an advanced color and printing technology developed by Charles Eckstein. He employed 36 colors in combination with designs to depict the diverse natural and social worlds of Java which highlighted agricultural production and complicated patterns of land-use. In 1853, the topographical survey was begun under the auspices of the Geographical Service. In 1864 the survey was transferred to the independent *Topographische Dienst* (Topographical Service) which consisted of four mapping brigades, each consisting of two officers and ten military assistants. The brigades not only included military surveyors but increasingly indigenous assistants and informants. Field surveys had to be elaborated in Batavia before they were forwarded to the Netherlands, where they printed at the scale of 1:100,000. Printing of the maps in The Hague did not commence until 1868. And it took until 1886 before all twenty-two residency maps were printed.

A primary impetus of this ambitious mapping program was the need for the military, colonial officials, and merchants to be able to see clearly the nuances of a landscape which was not known well. It was land in flux, already having been altered by the *Cultuurstelsel* (Cultivation System) which the Dutch introduced in the 1830s. This agricultural system depended on the "commandeering" of peasant land and labor for the cultivation of the prime export crop, sugar. But travel narratives and reports also stimulated the need for more accurate large scale maps. Scientists such as the botanist and geologist Franz Junghuhn described in detail the botany and volcanology of Java. His encyclopedic works called for more detailed maps and insets that would show the locations of and distances between numerous places. Still other publication focused on whether government lands were or were not being productive; and officials and entrepreneurs alike needed to know where such lands lay and how extensive they were.

This paper examines the maps from the standpoint of how a colonial administrator in Java, or a colonial official in the Hague, or a merchant might view and use the maps. It is clear that the maps were meant "to catalogue the countryside" (Shahid Amin) and to be used in tandem with agricultural statistics being produced simultaneously. However, the use of standardized and uniform colors, notably red and forest green, also showed any viewer of the map where Europeans lived and worked in contrast to the villages of the much more numerous indigenous population. Various brightly colored banners across the landscape pinpoint the locations of the representatives of colonial government, the residents, the assistant residents, and other local indigenous officials. Other colors immediately signaled type of crop production and relative size space allotted to that crop. That the maps were an extraordinary artistic tour-de-force was unmistakable (the maps won special awards at Philadelphia and Paris). Yet the production of the maps was very slow. The heavy cost of the project delayed production. So the published maps were already out-of-date when they started to be printed in 1868.

Nadal, Francesc / Montaner, Carme

Professor, Department of Geography, Universitat de Barcelona / Institut Cartogràfic i Geològic de Catalunya, Barcelona

French Army Surveying of Catalonia (1823–1827): Technical Modernity against the Liberal Revolution

3U – Mapping the Modern State: Boundaries and Territories

In April 1823 a powerful French army, popularly known as *Los Cien Mil Hijos de San Luis*, crossed the Pyrenees with the aim of overthrowing the liberal regime established in Spain in January 1820 and restore the absolutist regime. A whole body of the French army, composed of 21,000 soldiers, was dedicated to the occupation of Catalonia. The French military intervention in Catalonia had two different periods. The first, of war, lasted from April to early November 1823, when the French army conquered Barcelona. The second, of occupation, lasted until the middle of 1828. During all these years, the French army had assigned to Catalonia an outstanding number of military engineers. All of them were trained at the *École polytechnique* in Paris, an institution created in 1794 by the French Republic, and the majority participated in the wars in defence of the new political order arisen from the French Revolution.

During both periods, these military engineers made a significant number of topographic surveys. In most of these surveys, they used the new technique of contour lines, which had already been used in Italy by French military engineers during the Napoleonic campaigns. The main survey was the *Lever nivelé de la place de Barcelone* a map composed of 54 sheets drawn up at 1/1 000 scale and with contour lines equidistant 1 meter. In this survey, made between December 1823 and October 1827, nine French military engineers took part. Other Catalan cities as Girona, Lleida o Tarragona were also subject of topographical surveys that gave rise to a cartography almost as detailed as that of the *Lever nivelé de la place de Barcelone*. All these topographical surveys contributed to improve and spread the use of the technique of level curves in the field of the French military cartography.

Olson, Kory

Associate Professor, Department of French, Stockton University, Galloway, New Jersey

Creating France's Next Cartographers: J. Parlier's La France en 7 cartes

1C – Nineteenth-Century Region Construction

Many French politicians and academics believed that their 1871 defeat to the Prussians happened in part due to the inability of the French army officers and soldiers to read maps. In order to change this situation, the government, with the help of people such as Vidal de la Blache, introduced geography and cartography into the national educational curriculum. By the turn of the century, wall maps and textbooks with geography helped build a national identity and exposed generations of school children to the two sciences. To help in this endeavor, in 1910, Jacques-Louis Parlier published his *La France en 7 cartes*, a "cahier de cartographie simplifiée." This cartographic manual's purpose was to teach primary and elementary school children how to draw maps of France via simple outlines using models with a grid pattern.

This paper examines Parlier's school textbook and its maps and investigates how he presents France to a generation of young minds. His activities, based on simple cartography and French natural geographic features, such as rivers and mountains, helped introduce much of the republic to his

readers. For example, his Carte 1 "Tracé sommaire' presents the nation's outline to pupils in a very basic manner, which they are then able to recreate following his directions. Later in his text, Carte 6, "Bassin du Rhône," goes into more detail as he explains how to trace the important river from its source to the Mediterranean Sea, incorporating river flow, tributaries, and mountain ranges on the way. On Parlier's final map, Carte 7 "Études des Côtes" activity, Parlier asks school children to use what they have learned throughout the book to draw the nation's challenging coastlines. Throughout his workbook, Parlier reinforces the notions of the shape and borders of France. Yet perhaps most important, his simplification of French geography and cartography allows children to make their own maps and become French cartographers in their own right.

Peixoto, Renato

Universidade Federal do Rio Grande do Norte (UFRN), Natal, Brazil

Nothing Lies Outside the Map: Varnhagen, Jaime Cortesão, and the Brazilian Representations of the Tordesillas Meridian

3U – Mapping the Modern State: Boundaries and Territories

Fifty years after Derrida's *annus mirabilis* (the publication of *Writing and Difference*, *Speech and Phenomena*, and *Of Grammatology* in 1967) we can still remember Brian Harley's affirmation in *Deconstructing the Map*: "I do not accept some of the more extreme positions attributed to Derrida [...] it would be unacceptable for a social history of cartography that to adopt the view that nothing lies outside the text". However, if we note that what Harley called "Derrida's notion of the rethoricity" was not a defense of indeterminacy but of undecidability, and that the famous phrase "nothing lies outside the text" should be comprehended as "there is nothing outside the context", could we realign Brian Harley's ideas on a *post-structuralist* trail?

Perhaps we need to rethink Harley's rejection of the neutrality of maps to favor an approach in which the representational value of the maps is not inquired in terms of the intentions of the cartographers but on the investigation of the logics of the cartographic transformation and its relation with the politics and the society. In this sense, for example, cartographic concepts such as the meridians can govern the cartographic representations, but despite their mathematical value the interpretation of these representations could be transformed, it was the case of Tordesillas meridian in Brazilian maps.

In 1854 was published *História Geral do Brazil*, the first compendium of Brazilian history, written by Francisco Varnhagen, a historian and diplomat. At the beginning of the book we can find a map in which the Tordesillas meridian presents the division of the world between Portugal and Castella "as conceived by the Pope". This map is a globular projection centered in the Tordesillas meridian, probably the only of its kind, and the first Brazilian map where the meridian was drawn at the longitude that is actually depicted in the school books (48º35′W).

One hundred years later, in 1959, was published the first edition of *Atlas Histórico Escolar*, a school atlas that sold more than one million copies and in which were presented contents and theses developed by Jaime Cortesão at the Ministry of Foreign Relations since the 1940s. At the very beginning of the Atlas a modern cartographic representation of Varnhagen's meridian was paired with an old map to explains that the first was mathematically correct but nobody really knew where the Tordesillas meridian stands.

Each representation of the Meridian posed an aporia that can only be explained if we consider why cartography was metalogic to Brazilian historians and geographers and how their maps tried to answer the defies of their political and social metagames. This paper comprises a comparative analysis of *História Geral do Brazil* and *Atlas Histórico Escolar* maps to propose that the representational value of its Tordesillas maps can be evaluated in the terms of undecidability and metagame.

Pinto, Karen

Assistant Professor, College of Innovation and Design, Boise State University, Boise, Idaho

Fit for an Umayyad Prince: The Earliest Extant Map of the Eastern World or Earliest Painting of the Moon?

3C – Literature and Landscape, Art and Iconography

Tucked away in the sand and sun of the Syro-Arabian desert that separates Jordan from Syria and Iraq is a most unusual spherical fresco. Housed in Quṣayr 'Amra, the bathhouse of an Umayyad prince, amidst images of famous kings and nudes, is an enigmatic gift: a map or a picture of the moon.

Interpretations of this unusual image range from crown, wreath, and garland. To these I add map/picture. But what is this spherical fresco a map or picture of? That becomes the central question and quest of this paper. Terrestrial possibilities are presented first. On the basis of the application of georeferencing it becomes clear that the closest match is the moon. That would make this the earliest extant image of the moon predating the present frontrunner by seven centuries!

I conclude by discussing symbolic meanings of this image in a brief iconographic and iconologic study of the meaning of this image in the context of the bathhouse's patron, the once and future Umayyad Caliph, al-Walīd II (r. r. 125/743-126/744). Reputed to have been the iconoclast of the Umayyad family, al-Walīd II lived most of his adult life in exile from the long-ruling caliph, his uncle, who wanted to disinherit him. Quṣayr 'Amra was al-Walīd II's exclusive retreat. Here, shut away from the world, al-Walīd II could inscribe on its walls his caliphal pretensions alongside his most carnal pleasures. Quṣayr 'Amra served thus as his canvas for decoration, desire, and testimony. It is in this context that an orb of the world mirroring the moon being handed to the prince who yearned to be caliph is best understood.

Seemann, Jörn

Assistant Professor, Department of Geography, Ball State University, Muncie, Indiana

Alexander von Humboldt, the Virtual Grenzgänger: *Mapping the Borderlands between Spanish and Portuguese Colonies in South America in the Early Nineteenth Century*

3U – Mapping the Modern State: Boundaries and Territories

In its original sense, the German word *Grenzgänger* can be translated as border crosser, or simply, a person who crosses boundaries. In May 1800, during his four-year travel through South America, the German naturalist Alexander von Humboldt reached the settlement of San Carlos, the last Spanish garrison on the Rio Negro before reaching the border to Brazil. Humboldt may have been tempted to hop the international frontier between the two Iberian colonies, but was warned that he could run the risk of being deported and having all his equipment confiscated by the Brazilian authorities. These restrictions did not prevent Humboldt from drawing location sketches and making detailed maps of the uncharted Portuguese territory during his trip and after his return to Europe in 1804. The aim of this paper is to discuss some of these borderland maps produced or inspired by the German scholar and read between the lines of the maps by analyzing place names, geographical features, and annotated texts. Among the material of analysis are maps from Humboldt's *Atlas Géographique et Physique des Régions Équinoxiales du Nouveau Continent*, his *Carte Itineraire de l'Orinoque* in different languages, a manuscript map of the Orinoco from the Radowitz Collection in Krakow, a

widely-unknown hand-drawn sketch of the Rio Negro from the James Ford Bell Library in Minneapolis, and Humboldt's diaries. The comparison of these different representations gives insights into Humboldt's mapping practices, forms of data collection, and cartographic imagination, taking into account that his maps, at least as far as the Portuguese territory was concerned, were not based on direct observation, but on secondary sources, hearsay, dead reckoning, and pure speculation. These inaccuracies may still occur in present-day surveys of the Amazon basin. In a broader context, I hope to contribute to the debate on the cartography of border mapping in space and time.

Silva, Valquiria

Universidade Federal de Minas Gerais (UFMG), Belo Horizonte, Brazil

The case of controversy between Archbishopric of Bahia and the Bishopric of Rio de Janeiro and the Jesuits

4U – Colonial mapping in Ibero-America

This paper will address to analysis some aspects of the cartographic production developed by members of the Company of Jesus in Portuguese America before 1720, particularly, on a French Jesuit Father Jacob Cocleo.

For 50 years of his 82 years, this French Jesuit lived in Brazil as a missionary, cartographer and astronomer. Within the Company of Jesus he occupied important functions including as principal of the *Colégio dos Jesuítas do Rio de Janeiro* (Jesuit College of Rio de Janeiro) 1682-1685. Cocleo was also a contemporary of others influential Jesuits such as Fathers Antônio Vieira, Alexandre de Gusmão, Antonil and others. Similar to these members, Cocleo becoming involved in important Oder matters in the Americas and projects of the Portuguese Crown in Brazil, in particular, he was closely involved in the Portuguese administration of Brazil's indigenous peoples.

During the last decade of sixteenth century the Portuguese Crown passed by a critical moment. The discovery of gold on its oversea lands shifted Portugal's gaze westward across the Atlantic and encouraged the Portuguese Crown to better understand its claims overseas, particularly in order to protect and legitimize them against other European nations such as Spain, France, Holland, England, etc. Likewise, regionally, this novelty caused an extensive jurisdictional conflict between the Archbishopric of Bahia and the Bishopric of Rio de Janeiro, which both claimed the authority throughout the territories adjacent to the San Francisco River, where the first evidence of gold deposits were discovered and which consequently increased the population settled there. In 1695 the Portuguese Crown hired the French Jesuit to map this territory. Manuscripts sources spread through archives, Brazilian, Portuguese and Italian, inform that it was frequently used throughout the 1700s.

Skurnik, Johanna

European and World History, University of Turku, Finland

Making Colonial Cartographies in the British Empire, c.1830–1870

1C – Nineteenth-Century Region Construction

For several decades, scholars have sought to understand the power of Western cartographies in forging dominant knowledge structures. The formation of knowledge about the world and how it becomes shared is a social process. It involves a constant interplay between individuals, societal structures and power relations that depend on material factors and spatio-temporal contexts. Hence,

maps and cartographic knowledge inherently gain their value as part of their social environments. Consequently, enquiries into the history of cartography should focus on critically examining how we can access the historical processes whereby particular cartographic representations gained epistemic authority.

This paper investigates colonial cartographies in the rapidly expanding British Empire in the mid-nineteenth century. It centers on the Arrowsmith map firm that was preeminent in the production of maps of British overseas possessions under the leadership of John Arrowsmith (1790–1873) from the 1830s to the 1870s. The firm had a central role in processing cartographic data concerning the colonies as it gained information directly from the state departments and other actors managing the territories such as the Hudson Bay Company as well as explorers, travelers and the scientific societies, the Royal Geographical Society in particular. The firm's maps were utilized in different societal contexts: the government offices and publications, scientific discussions, popularization of the results of explorations, and in public discussions concerning the colonies. Due to the scattered state of primary material, the firm has not yet received comprehensive examination. By examining the firm's products, their movement and consumption, this paper opens up new vistas to the study of colonial cartographies. The innovativeness of the project stems from its use of novel primary sources (correspondence, memos, newspapers, periodicals etc.) to bridge together the different groups of individuals whose actions constituted the establishment of shared ways of cartographically knowing the colonial territories.

St. Pierre, Jym

Restore the Maine Woods

Mapping the Maine Woods

4C – Land and Land Ownership in the Nineteenth-Century U.S.

The Maine coast was one of the first places in North America to be charted by Europeans, but northern Maine was one of the last landscapes in the United States to be mapped. In the 1500s and 1600s, speculators sent waves of explorers in search of a city of gold and silver believed to be inland along Maine's midcoast region. Charts, based on expeditions sent from France, Spain, and England, labeled the region Norumbega. However, epic wars between Old World powers spilled over into the New World. Battles, especially among the English and the French and indigenous peoples, kept Maine unsettled. The boundary between Maine and Canada was not settled until the middle of the 19th century, but even after that maps often cut off the northern part of the state to make it fit, showing the region on noncontiguous insets. This illustrated presentation will summarize how interior Maine changed from the mythical Norumbaga in the 17th century, to a legendary wilderness in the 18th-19th centuries, to the largest remaining "wildland" in the eastern U.S. in the twentieth and twenty-first centuries.

Swab, John

Department of Geography, University of Oklahoma

Mapping Risk in Oklahoma and Indian Territories: The Rivalry between the Clarkson Rating Bureau and the Sanborn Map Company, 1890–1915

2C – Mapping Modern Infrastructure

Fire insurance maps produced by the Sanborn Map Company have long been the standard for highly detailed cartography of urban America. These maps, made to exact specifications integrating cadastral data and precise information about the built environment, have served as the historical record of past urban environments for thousands of towns across the United States. Yet there has not been an abundance of scholarly literature that ties Sanborn maps—and the history of the Sanborn Map Company—to larger historical discussions about the conditions of the insurance market during the late 19th and early 20th centuries. This paper seeks to make a contribution towards this literature, tying Sanborn maps to the development of the insurance market in early Oklahoma.

Oklahoma and Indian Territories present a unique case study in the history of the Sanborn Map Company, as for over a decade a second company competed with Sanborn to produce fire insurance maps of the territories. While others have discussed the Sanborn Map Company's other competitors, such as the Dakin Publishing Company along the Pacific coast and E. Hexamer & Sons in Philadelphia; Oklahoma's Clarkson Rating Bureau seems to have been overlooked. From approximately 1892 to 1909 the Clarkson Rating Bureau produced manuscript fire insurance maps of Oklahoma towns, continuing to update them even when a corresponding "official" Sanborn map had been published. This is significant as by the beginning of the 20th Century most other fire insurance map companies had either been absorbed by Sanborn, had exited the fire insurance mapping industry, or were limited to very small geographic markets. There were few, if any, other mapping companies that rivaled Sanborn in offering cartographic coverage of an entire state.

With a lack of a public archive of internal Sanborn Map Company documents there is significant ambiguity about how Sanborn handled competitors during the late 19th and early 20th centuries. Thus, this paper uses the remaining fire insurance maps of both companies as proxies for company archival records. Through exploring the cartographic interplay between the rising giant of the insurance industry (the Sanborn Map Company) and the upstart competitor (the Clarkson Rating Bureau), the history of the fire insurance market and fire insurance mapping in early Oklahoma is revealed, providing a new context in which to view these maps.

Talbert, Richard

William Rand Kenan Jr. Professor, Department of History, University of North Carolina, Chapel Hill

German Maps of Asia Minor and Their Ottoman Adaptation in the Early Twentieth Century

2U – Modern Imperial Territorial Mapping

The paper brings to the attention of historical cartographers one instructive aspect of a broader investigation into the compilation and impact of largely forgotten maps published by Heinrich Kiepert (*Specialkarte vom Westlichen Kleinasien*) and his son Richard (*Karte von Kleinasien*) between 1890 and 1907, the *Karte* with revisions to 1916 and re-issue in 1929. Despite their blank areas and heavy reliance upon travelers' observations of mixed quality, these maps were considered standard reference works, especially once coverage of Asia Minor (Turkey) became an urgent priority for the Ottoman General Staff and the Great Powers. Nothing but Richard Kiepert's 1:400,000 *Karte* (23 sheets) spanned the region's entire territory. Although there had been a cartographic section of the Ottoman General Staff since the 1880s, almost no systematic survey was authorized in Asia Minor until 1908, and efforts then concentrated on the East where conflicts threatened. Two British military intelligence series at 1:250,000 draw on the *Karte*: IDWO 1522 east of longitude 36, and especially GSGS 2097 westwards thence. It was prescribed for use with the Asia Minor 'Admiralty Handbooks'

(1918-19), and was even supplied to the French army in 1940. Two comparable 1:250,000 series produced by the Greek General Staff in 1920-21 similarly draw on the *Karte*.

However, more creative use was made of the *Karte* by Ottoman military cartographers at three principal scales (1:1,000,000, 1:400,000, 1:200,000). Their work seems to be least known of all. If a complete collection of the relevant series has been gathered, organized and made accessible, it eludes me. To recall reliance upon German maps naturally dents national pride, and the Arabic script of pre-1928 Turkish is challenging. Even so, the Ottoman adaptation of Kiepert's cartography under pressure of war-time and strained resources proves revealing. His choices of projection and color palette are revised. The maps' function becomes exclusively contemporary; hence the marking of 19th century travelers' itineraries is now dropped, and line-work for principal routes is bolded. Omission of ancient Greek and Latin place-names signifies detachment from the scholarly passion for classical civilization which drove much European exploration of Asia Minor. At 1:200,000 scale, adapted sheets that reproduce Kiepert's impressionistic hachuring of elevation are eventually superseded by replacements with contours derived from survey data. Altogether, the achievements of both the Kieperts and the Ottoman cartographers merit higher esteem.

Thomas, Leah

Assistant Professor of English, Department of Languages and Literature, Virginia State University

Human Commodification: Mapping African Presence in Early America

6C – Mapping Conflict, Conflicted Mapping

Early maps of the Americas depict not only Native American and European presence but also African presence to construct American identities and representations of colonization, commerce, and empire. In addition to cartographic imagery and description, African presence is identified based upon toponymy as in obvious place names as well as locators such as "negro burial grounds" and living spaces to determine what it meant to be mapped as African or of African descent in the Americas. Locating African presence in state, topographic, and survey maps of the early Americas from New York to the British Caribbean offers insights into geographical situations of enslaved, marooned, and free blacks. Neither imagery nor toponymy on these early maps is arbitrary or simply decorative but demonstrates that people identified as African or of African descent are surveyed and mapped as part of the state. Examples of some early maps that portray African presence in the Americas range from Richard Ligon's *A Topographicall Description . . . of Barbados* (London, 1657); Joshua Fry and Peter Jefferson's *A Map of the Most Inhabited Part of Virginia* (London, [1755]); John Henry's *A New and Accurate Map of Virginia* (London, 1770); James Cook's *A Map of the Province of South* (London, [1773]); Thomas Jefferys's *Turks Islands, from a Survey Made in 1753* (London, 1775); and David Grim's *A Plan of the City and Environs of New York* ([New York], 1854). These maps are also informed by texts with which they were published, such as Ligon's *A True & Exact History* (London, 1657) and D.T. Valentine's *Manual of the Corporation of the City of New York* ([New York], 1854). The listed maps contribute new readings of the following contemporaneous texts: Aphra Behn's *Oroonoko* (London, 1688); Daniel Defoe's *Robinson Crusoe* (London, 1719); William Williams's *Mr. Penrose: The Journal of Penrose, Seaman* ([ms., 1783?]); Charlotte Lennox's *Euphemia* (London, 1787); Olaudah Equiano's *The Interesting Narrative of the Life of Olaudah Equiano, or Gustavus Vassa, the African* (London, [1789]); Tabitha Tenney's *Female Quixotism* (Boston, 1801); and Mary Prince's *The History of Mary Prince, a West Indian Slave* (London and Edinburgh, 1831). The African presence that emerges from

the intersections of these maps and texts unveils the destruction of humanity when surveyed and mapped as commodity.

Veres, Madalina

Postdoctoral Mellon Fellow in Digital History, American Philosophical Society, Philadelphia, Pennsylvania

The American Philosophical Society's Contributions to Infrastructure Projects on the Delaware River

2C – Mapping Modern Infrastructure

The involvement of academy of sciences, observatories and other learned institutions in assisting surveying and mapmaking projects in the long eighteenth century offers the opportunity to study the intersections of power and knowledge during this time. In my presentation, I will discuss maps from the collection of the American Philosophical Society (APS) in Philadelphia, connected with the development of infrastructure projects on the Delaware River.

In the late 1760s, the APS raised money from the city's merchants in order to examine "the best place to cut a Canal to join the waters of the Delaware River and Chesapeake Bay." This ambitious project, that would have shortened the journey from Philadelphia to Baltimore by more than 300 miles and would have greatly increased the trade through Philadelphia, did not come to fruition until the late 1820s. Nonetheless, already from 1769, the desire for this canal led to a flurry of surveying and mapmaking activities under the aegis of APS members. The results of these surveys, including maps, were deposited with the Society and informed an article in the first issue of the *Transactions of the American Philosophical Society* (1771).

The cartographic knowledge collected in the 1760s and 1770s, guided the work of Benjamin Henry Latrobe, named in 1804 engineer of the Chesapeake and Delaware Canal Company. Latrobe was an APS member and had in his possession at least two of the Society's maps showing projects for the Canal, including one prepared by Thomas Gilpin in 1769. Clearly, the Society's effort to collect knowledge for this ambitious infrastructure project had maintained its relevance. The direct involvement of APS members in infrastructure projects on the Delaware River continued in the nineteenth century, when William Strickland supervised the construction of the Delaware Breakwater between 1828 and 1841. Strickland, who used to serve on the Society's Building Committee and was aware of the APS members' interest in "useful knowledge", sent a copy of his "Harbour of the Delaware Breakwater from the Atlantic Ocean" to the Society on June 8, 1833. In this way, Strickland acknowledged the leading role of the APS in facilitating scientific dialogues and providing a repository for cartographic knowledge related to state infrastructure projects.

Weessies, Kathleen W.

Head, Map Library, Michigan State University, East Lansing, Michigan

John Farmer, Michigan's Extraordinary Mapmaker

5C – Sharing and Mixing Information across Modes and Cultures

As the land west of the original thirteen states were settled in the 19th century, mapmakers used a variety of source materials to incorporate growing knowledge of the area into their work. Map source materials moved in a succession from explorer & traveler accounts to reports from scientific endeavors, military maps, railroad company surveys, legal boundary studies (international, State, and Native American), and at the most detailed the U.S. Land Survey plats. The State of Michigan is

perhaps unique in that it also had self-taught mapmaker, John Farmer. In 1844, John Farmer of Detroit launched his masterwork, "The State of Michigan and the Surrounding Country" which ran to twenty-two editions over thirty years. This map contained extreme detail of every surveyed square mile, depicting every stream, swamp, and every road and trail in the state. Farmer began his career by publishing a map for settlers in 1825—the same year the opening of the Erie Canal greatly increased the flow of settlers to the state. Not finding eastern engravers up to his exacting standards, he learned how to engrave copper plates and began producing his own maps. Farmer worked tirelessly to constantly update maps to document changes in the state's development. No other state in the Northwest Territory or possibly in the entire United States has such a comprehensively detailed cartographic record from this time period. Forty years after his death the State of Michigan even used this map as their source material for a swamplands map of the state. A close analysis of all editions of this map reveals Farmer's likely source documents and suggests clues to his cause of death.

Weimer, David / Denis, Lena

Harvard Map Collection, Harvard University, Cambridge, Mass.

Monographs, Molasses, and Maps: Circulating Commodities and the Creation of the Harvard Map Collection

7C – Conditioning Map Knowledge and Technology in the Nineteenth Century

200 years ago, in June 1818, a Beverly merchant finalized his biggest—perhaps only—philanthropic gesture by purchasing and donating one of the largest private map collections in Europe to Harvard University. Israel Thorndike—the savvy merchant—had become rich trading first in the Caribbean and then in the Pacific, with a global web of ports and agents at his disposal. Christoph Ebeling—the scholar and map collector—had acquired the incredible library of Georg Brandes and added to with agents of his own, researching his (unfinished) geography of the United States through a network of informants and colleagues across the Atlantic.

By looking at the case of Thorndike's purchase and donation of Ebeling's maps, our paper argues that we can best understand the growth of early US map collections through the intersection of these two individuals' objectives –the speculator's and the cartographer's accumulation connecting. Building on James Akerman's analysis of the independent "treasure-house" library through the Newbury Library's example, we explore this earlier genre of map collection through Harvard's example. Specifically, we contrast the more common state or royal collection of maps with a private collection that was moved across the Atlantic on a rich merchant's whim. Crucially, in this respect, in acquiring Ebeling's library, Thorndike and his agents outmaneuvered both John Quincy Adams representing the Library of Congress and Frederick William III, the King of Prussia. Thorndike's gift demands a new mercantile paradigm precisely because it took maps away from either a royal or a state collection.

That is, the birth of Harvard's collection encourages us to understand a kind of map collection as a product of a network created not through espionage and state power but scholarship and mercantile acumen.

White, Scott

Professor, Department of Geosciences, Durango, Colorado, USA

Mapping the Changes to Yellowstone National Park's Boundary

4C – Land and Land Ownership in the Nineteenth-Century U.S.

Although the history of the exploration and establishment of Yellowstone National Park is well documented, the roles that maps have played in the depiction of the Park's original boundary, and in the explanations and justifications for adjustments to that boundary, are less well known. America's oldest national park was established by the U.S. Congress and President Grant on March 1, 1872, as a "public park or pleasuring-ground", and was to be located near the headwaters of the Yellowstone River. The park boundary was not formally surveyed at the time, and the earliest map of the park from the 1871 Hayden expedition shows a simple rectangular border that enclosed the park's main geologic wonders. During the 1920s, Presidents Coolidge and Hoover appointed commissions to study a number of proposed boundary changes. Maps included in these commission's reports clearly show the role that topography played in the decision-making process as the straight eastern boundary was now proposed to follow the crest of the Absaroka Range, and a greatly expanded southeastern boundary would include the Thorofare Plateau and the actual headwaters of the Yellowstone River. Ultimately, some boundary additions and subtractions were approved to the northwest, northeast and eastern boundaries in 1929, with a later small addition at the north boundary near Gardiner, Montana, in 1932. The southeastern Thorofare addition to the park was never approved by Congress primarily due to opposition from local hunters and guides. In addition to the maps made for politicians, tourist maps depicting both the proposed and the final boundary changes were made for National Park Service brochures, railroad company advertising and promotional materials, and the Haynes series of guidebooks. In addition to the maps, the authors of these publications provided the reader with vivid descriptions of the important new sites that tourists could visit within these new park boundaries. Persuasive cartographic products were instrumental in the final deliberations and decisions by Congress regarding the boundary changes. These maps also helped the public to understand how park additions would enrich their travel experiences in America's Wonderland, Yellowstone National Park.